**3 Results**

**3.1 Environmental Variables**Chart, scatter chart

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**Figure 1**. Daily REW averaged by density during growing season. DOY: Date of year

Chart, scatter chart

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**Figure 2**. Weekly averages of sapflow per ground area and VPD (on a log scale)Chart, scatter chart

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**Figure 3**. Weekly averages of sapflow per ground area and REW (on a log scale)

**Table 2**. Effect of REW and VPD as covariates on sapflow



**Figure 4**. Effect of REW and VPD between Genotypes and Densities

Chart, bar chart, waterfall chart

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**3.2 Sapflux**

**Table 3.** Probability table of paired t-tests in sapflux (Significance codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’)



A picture containing chart

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**Figure 5**. Inner and outer probe sapflux within each treatment (Block 4 only)

**3.3 Sapwood Area**

Low density planting resulted in greater sapwood area increment than high density planting across all genotypes (Table X). In the order of greatest sapwood area increment to the least sapwood area increment, the genotypes were ranked as C, O, B, A under high planting and ranked C, O, A, B under low planting density (Figure X).

**Table 4**. Summary of plot level sapwood area.



Chart, histogram

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**Figure 6**. Sapwood per unit ground area increment during 2017, growing season from day 152-273

**3.4 Genotypes and Planting Densities**

The two-way ANOVA returned significant P values for density (F = 1151.4), genotype (F = 67.468), and their interactions (F = 115.6). DOY is significant as an independent variable and significant as an interaction term with density and genotype, respectively and together. Low density planting resulted in an average of 1.84 L decrease in daily sapflow per ground area comparing to high density planting. With density, genotype, DOY, and their interactions, the model explained 48% of total variation in *P. taeda* transpiration.

**Table 5**. Summary table: effects of density, genotype, DOY, and their interactions on sapflow and sapwood area.



**Chart, bar chart

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**Figure 7**. Adjusted means of transpiration across genotypes and densities.

**3.5 Seasonal Trend**

**Chart, line chart

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**Chart, line chart

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**Figure 8 & 9**. Weekly sapflow average by high and low density.